



US 20060144368A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2006/0144368 A1**
Knight et al. (43) **Pub. Date: Jul. 6, 2006**(54) **FUEL SYSTEM**(52) **U.S. Cl.** 123/447; 123/456(76) Inventors: **Andrew R. Knight**, Gloucestershire
(GB); **Adam Wilkin**, Gloucestershire
(GB)(57) **ABSTRACT**Correspondence Address:
DELPHI TECHNOLOGIES, INC.
M/C 480-410-202
PO BOX 5052
TROY, MI 48007 (US)(21) Appl. No.: **10/561,773**(22) PCT Filed: **Jun. 17, 2004**(86) PCT No.: **PCT/GB04/02578**(30) **Foreign Application Priority Data**

Jun. 20, 2003 (EP)..... 03253919.9

Publication Classification(51) **Int. Cl.**
F02M 63/00 (2006.01)
F02M 69/46 (2006.01)

A fuel system for supplying pressurised fuel to a plurality of fuel injectors (14a-14f) comprises an accumulator assembly (16) having first and second accumulator volumes (18, 20) defined within a common accumulator housing (22), supply means (42) for supplying fuel at a supply pressure level to the first accumulator volume (18) and a plurality of unit pumps (10a-10f). Each unit pump is arranged to receive fuel at the supply pressure level from the first accumulator volume (18) and pressurises said fuel to an injectable pressure level for supply to the second accumulator volume (20). Each unit pump (10a-10f) includes a pumping plunger (50) for pressuring fuel within an associated pump chamber (52) and being integrated with the accumulator housing (22) so as to permit communication between the first accumulator volume (18) and the pump chamber (52) internally within the accumulator housing (22).

